Supplementary Table 1. Characteristics of studies included in the meta-analysis.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **First author/year** | **Location of main study sitea** | **Income levelb** | **Number of sites** | **Sepsis definition criteria** | **No. of patientsd** | **Variables used in meta-analysis** | **Outcomes assessed** | **Overall risk of biase** |
| Alam A, 2020 | India | LMICi | 1 | 2005 IPSCC | 116 | age, sex, vasopressors, PRISM, PELOD, mechanical ventilation, lactate | mortality | low |
| Alejandre C, 2020 | Spain | HIC | 1 | Bones | 72 | CRP, procalcitonin | sepsis | low |
| Alsadoon A, 2020 | Saudi Arabia | HIC | 1 | 2005 IPSCC | 189 | age, sex, MODS, PIM III, mechanical ventilation | severe sepsis, septic shock | moderate |
| Ames SG, 2018 | United States | HIC | 153 | ICD-9 codes | 9013 | age, sex, chronic conditions, mechanical ventilation | mortality | low |
| Angurana SK, 2020 | India | LMIC | 1 | 2001 SCCM/ESICM/ACCP/ATS/SIS | 50 | age, sex, PRISM, GCS, VIS, SOFA, MODS, AKI, CRP | mortality | moderate |
| Baranwal AK, 2020 | India | LMIC | 1 | 2005 IPSCC | 80 | age, sex, malnutrition, SAM, BMI, vasopressors, VIS, LVEF, mechanical ventilation, CRP, organ failures, PELOD, PRISM | mortality | moderate |
| Boeddha NP, 2018 | Netherlands | HIC | 52 | 2005 IPSCC | 795 | age, sex, vasopressors, mechanical ventilation, lactate, PRISM, PIM II, PIM III | mortality | low |
| Branco RG, 2005 | Austria, Germany, Lithuania, The Netherlands, Spain, Switzerland, and United Kingdom | HIC | 1 | ACCM 2002 | 57 | sex | mortality | moderate |
| Chen M, 2017 | China | UMIC | 1 | Sepsis-3 | 788 | age, sex, temperature, systolic BP, glucose, potassium, CRP, procalcitonin, troponin, BNP, PT, creatinine, urea, albumin, bilirubin, ALT | mortality | low |
| Chisti MJ, 2015 | Bangladesh | LMIC | 1 | Otherc | 50 | age, sex, base excess, mechanical ventilation, LOC, GCS | severe sepsis | low |
| Choi SJ, 2018 | South Korea | HIC | 1 | 2005 IPSCC | 226 | age, sex, oncologic condition, CVP, VIS, mechanical ventilation, lactate, BNP, PRISM,  | mortality | low |
| Choi SJ, 2017 | South Korea | HIC | 1 | 2005 IPSCC | 83 | age, sex, CVP, VIS, mechanical ventilation, platelets, SOFA, PRISM,  | mortality | moderate |
| Choudhary R, 2017 | India | LMIC | 1 | 2005 IPSCC | 148 | age, sex, GCS, mechanical ventilation, base excess, pH, lactate, PRISM | mortality | moderate |
| Costa de Santana M, 2017 | Brazil | UMIC | 1 | 2005 IPSCC | 120 | age, malnutrition | sepsis | moderate |
| Couto-Alves A, 2013 | United Kingdom | HIC | 6 | 2005 IPSCC | 1073 | age, sex, vasopressors, mechanical ventilation, base excess, lactate, potassium, CRP, platelets, fibrinogen, INR, aPTT | mortality | high |
| Cully M, 2020 | United States | HIC | 1 | 2005 IPSCC | 69 | age | mortality | moderate |
| da Silva ED, 2008 | Brazil | UMIC | 1 | 2005 IPSCC | 155 | age, sex, vasopressors, mechanical ventilation,  | mortality | moderate |
| Dagher GA, 2019 | Lebanon | UMIC | 1 | 2005 IPSCC | 185 | oncologic condition | mortality | high |
| de Souza DC, 2016 | Brazil | UMIC | 21 | 2005 IPSCC | 464 | age, sex, malnutrition, organ failures, PRISM | sepsis, mortality | low |
| El-Zayat RS, 2018 | Egypt | LMIC | 1 | 2005 IPSCC | 50 | age, sex, heart rate, mean blood pressure, CVP, VIS, LVEF, glucose, base excess, lactate, potassium, troponin, platelets, hemoglobin, PT, aPTT, creatinine, PRISM | mortality | low |
| Fiser RT, 2005 | United States | HIC | 1 | Bone | 359 | age, sex, vasopressors, mechanical ventilation, organ failures, AKI, PRISM | mortality | high |
| Goonasekera CD, 2018 | United Kingdom, United States | HIC | 1 | 2005 IPSCC | 62 | age, sex, mechanical ventilation, PIM II | mortality | moderate |
| Gorgis N, 2017 | United States | HIC | 1 | 2005 IPSCC | 74 | age, sex, vasopressors, mechanical ventilation, lactate, PELOD, PIM III | mortality | moderate |
| Ibrahiem SK, 2016 | Egypt | LMIC | 2 | 2001 SCCM/ESICM/ACCP/ATS/SIS | 57 | age, sex, obesity, PELOD, PRISM | mortality | low |
| Isguder R, 2016 | Turkey | UMIC | 1 | 2005 IPSCC | 188 | age, sex, chronic conditions, mechanical ventilation, CRP, procalcitonin, lactate, platelets, hemoglobin, PELOD, PRISM | mortality | moderate |
| Jabornisky R, 2019 | Argentina | UMIC | 59 | 2005 IPSCC | 315 | chronic conditions, oncologic condition, malnutrition, SAM, vasopressors | mortality | moderate |
| Jaiswal P, 2020 | India | LMIC | 1 | 2005 IPSCC | 149 | age, sex, temperature, heart rate, hypotension, systolic blood pressure, stroke index, vasopressors, oxygen saturation, mechanical ventilation, LOC, GCS, platelets, pH, creatinine, urea, bilirubin, ALT, pSOFA | mortality | moderate |
| Jaramillo-Bustamante JC, 2012 | Colombia | UMIC | 19 | 2005 IPSCC | 1051 | age, MODS | mortality | moderate |
| Kaur G, 2014 | India | LMIC | 1 | 2005 IPSCC | 50 | age, sex, malnutrition, vasopressors, mechanical ventilation, PRISM | mortality | moderate |
| Khan MR, 2012 | Pakistan | LMIC | 1 | 2005 IPSCC | 133 | sex, chronic conditions, MODS | mortality | moderate |
| Lanziotti VS, 2018 | Brazil | UMIC | 3 | 2005 IPSCC | 103 | age, sex, vasopressors, mechanical ventilation, CRP, PELOD | mortality | moderate |
| Lawang SA, 2019 | Indonesia | UMIC | 1 | 2005 IPSCC | 108 | age, sex, CRP, procalcitonin | mortality | high |
| Lefevre N, 2017 | Belgium | HIC | 1 | 2005 IPSCC | 142 | sex | mortality | high |
| Li J, 2019 | China | UMIC | 1 | 2005 IPSCC | 50 | age, sex, vasopressors, LVEF, troponin, BNP | mortality | high |
| Liu GB, 2018 | China | UMIC | 1 | 2001 SCCM/ESICM/ACCP/ATS/SIS | 222 | CRP, procalcitonin | mortality | high |
| Lopez-Reyes CS, 2018 | Mexico | UMIC | 1 | 2005 IPSCC | 165 | age, sex, stroke index | mortality | high |
| Maat M, 2007 | The Netherlands | HIC | 1 | 2005 IPSCC | 287 | sex, base excess, pH, CRP, platelets, fibrinogen, PRISM | mortality | high |
| Markovitz BP, 2005 | United States | HIC | 27 | ICD-9 codes | 6693 | age, sex, race, fibrinogen | mortality | moderate |
| Matics TJ, 2007 | United States | HIC | 1 | Sepsis-3 | 6303 | age, sex, PRISM | sepsis | high |
| Mianling Z, 2019 | China | UMIC | 1 | 2005 IPSCC | 516 | age, sex, pSOFA, SOFA, PELOD-2 | mortality | moderate |
| Nazir M, 2019 | India | LMIC | 1 | 2005 IPSCC | 112 | age, sex, oncologic condition, temperature, heart rate, CVP, mean BP, vasopressors, VIS, mechanical ventilation, GCS, platelets, PT, creatinine, albumin, bilirubin, lactate, PELOD, PRISM | mortality | moderate |
| Niederwanger C, 2018f | Austria | HIC | 1 | 2005 IPSCC | 250 | age, sex, CRP, platelets, fibrinogen, PT, aPTT | mortality | moderate |
| Niederwanger C, 2020 | Austria | HIC | 1 | 2005 IPSCC | 398 | age, sex, base excess, pH, CRP, procalcitonin, platelets, hemoglobin, fibrinogen, PT, aPTT, creatinine, bilirubin, PELOD, PELOD-2, PRISM, PIM II, PIM III | mortality | moderate |
| Oliveira CF, 2008 | Brazil | UMIC | 1 | 2001 SCCM/ESICM/ACCP/ATS/SIS | 90 | age, sex | mortality | high |
| Ostrowski JA, 2017 | Australia, New Zealand | HIC | 10 | 2005 IPSCC | 303 | age, sex, mechanical ventilation | septic shock | low |
| Peters C, 2018 | United States | HIC | 130 | 2005 IPSCC | 40228 | age, sex, hypotension, mechanical ventilation, | mortality | moderate |
| Peterson LS, 2018 | United States | HIC | 1 | ICD-9 codes | 454 | obesity | mortality | moderate |
| Pound CM, 2008 | Canada | HIC | 1 | ACCM 2002 | 69 | oncologic condition | mortality | low |
| Prout AJ, 2018 | United States | HIC | 28 | ICD-9 codes | 14243 | chronic conditions | mortality | high |
| Ross PA, 2019 | United States | HIC | 53 | ICD-9 codes | 7038 | obesity | mortality | moderate |
| Rousseaux J, 2013 | France | HIC | 1 | 2005 IPSCC | 146 | age, sex, heart rate, systolic blood pressure, stroke index, lactate | mortality | moderate |
| Ruth A, 2014 | United States | HIC | 43 | ICD-9 codes | 49153 | age | mortality | moderate |
| Sachdev A, 2020 | India | LMIC | 1 | 2005 IPSCC | 138 | age, sex, VIS, mechanical ventilation, glucose, lactate, PELOD, PRISM | mortality | moderate |
| Sakyi SA, 2020 | Ghana | LMIC | 1 | 2005 IPSCC | 60 | age, sex, CRP, procalcitonin, hemoglobin | sepsis | moderate |
| Santolaya ME, 2008 | Chile | HIC | 6 | 2005 IPSCC | 151 | age, sex, LOC | severe sepsis | low |
| Sarmin M, 2019 | Bangladesh | LMIC | 1 | Otherc | 191 | age, sex, systolic BP, vasopressors, mechanical ventilation, seizures, LOC, CRP, AKI | mortality, severe sepsis, septic shock | moderate |
| Sarmin M, 2014 | Bangladesh | LMIC | 1 | Otherc | 88 | sex | mortality | high |
| Sayed SZ, 2020 | Egypt | LMIC | 1 | 2005 IPSCC | 60 | CRP, platelets, PRISM | mortality | low |
| Schlapbach LJ, 2017 | Australia, New Zealand | HIC | 31 | 2005 IPSCC | 1697 | sex, chronic conditions, mechanical ventilation | mortality | low |
| Scott HF, 2017 | United States | HIC | 1 | ACCM 2007 | 1299 | age, sex, chronic conditions, oncologic condition, temperature, heart rate, hypotension, systolic BP, oxygen saturation, mechanical ventilation | mortality | moderate |
| Shah S, 2020 (7036) | India | LMIC | 1 | 2005 IPSCC | 200 | SAM, hypotension, vasopressors, mechanical ventilation, LOC, GCS, MODS | severe sepsis, mortality | moderate |
| Shah S, 2020 (8327) | India | LMIC | 1 | 2005 IPSCC | 80 | age, vasopressors, mechanical ventilation, platelets, hemoglobin, procalcitonin | mortality | moderate |
| Shime N, 2012 | Japan | HIC | 9 | 2005 IPSCC | 127 | age, sex, chronic conditions, PRISM | mortality | moderate |
| Smok B, 2020 | Poland | HIC | 1 | 2005 IPSCC | 180 | age, CRP, procalcitonin, AKI | sepsis | moderate |
| Tang X, 2020 | China | UMIC | 1 | 2005 IPSCC | 819 | age, sex, lactate, CRP, platelets, INR, PT, aPTT, creatinine, urea, bilirubin, ALT, PRISM | mortality | moderate |
| Thakkar RK, 2019 | United States | HIC | 128 | 2005 IPSCC | 138, 418i | age, sex, oncologic condition, MODS, PELOD, PIM 3 | mortality | high |
| Tonial CT, 2020g | Brazil | UMIC | 1 | 2005 IPSCC | 294 | age, sex, chronic conditions | mortality | moderate |
| Tonial CT, 2020h | Brazil | UMIC | 1 | 2005 IPSCC | 312 | Vasopressors, mechanical ventilation, lactate | mortality | moderate |
| Verhoeven JJ, 2011 | The Netherlands | HIC | 1 | 2001 SCCM/ESICM/ACCP/ATS/SIS | 78 | age, sex, vasopressors, VIS, mechanical ventilation, glucose, lactate, CRP, PRISM | mortality | high |
| Vila-Perez D, 2014 | Spain | HIC | 7 | 2005 IPSCC | 136 | Chronic conditions, mechanical ventilation, LOC, glucose, lactate, CRP, platelets, hemoglobin, AKI, MODS, pSOFA | mortality | high |
| Villegas D, 2010 | Colombia | UMIC | 1 | Otherc | 110 | sex, malnutrition | mortality | high |
| Wang C, 2020 | China | UMIC | 11 | 2001 SCCM/ESICM/ACCP/ATS/SIS | 82 | age, sex, vasopressors, mechanical ventilation, MODS | severe sepsis, mortality | moderate |
| Wang Y, 2019 | China | UMIC | 1 | 2005 IPSCC | 1606 | age, sex, seizures, LOC, CRP | mortality | moderate |
| Weiss SL, 2015 | United States | HIC | 128 | 2005 IPSCC | 569 | age, hemoglobin | mortality | moderate |
| Wiens MO, 2016 | Uganda | LIC | 2 | 2005 IPSCC | 1121 | age | sepsis | moderate |
| Wu Q, 2017 | China | UMIC |  | 2001 SCCM/ESICM/ACCP/ATS/SIS | 214 | age, sex, CRP, procalcitonin | mortality | high |
| Xiao C, 2019 | China | UMIC | 8 | 2005 IPSCC | 245 | age, sex | mortality | moderate |
| Xie X, 2019 | China | UMIC | 1 | 2005 IPSCC | 205 | age, temperature, lactate, CRP, procalcitonin, platelets, hemoglobin, creatinine, urea, albumin, organ failures, MODS | mortality | high |
| Yang J, 2020 | China | UMIC | 1 | 2005 IPSCC | 86 | Platelets, hemoglobin | sepsis | high |
| Zhang X, 2019 | China | UMIC | 1 | 2005 IPSCC | 160 | age, sex, lactate | septic shock | high |
| Zhong M, 2019 | China | UMIC | 1 | 2005 IPSCC | 516 | age, sex, creatinine, bilirubin, PELOD-2 | mortality | high |

aFor multi-centre studies, this was the site of the corresponding author.

bCountries were identified as low-(LIC), low-middle-(LMIC), upper-middle-(UMIC) and high-income countries (HIC) according to the World Bank classification of 2019-2020.

cChisti defined sepsis as tachycardia plus hypothermia (35.0°C) or hyperthermia (38.5°C), or abnormal WBC count plus poor peripheral perfusion (mean arterial pressure 50 mm of Hg and/or absent peripheral pulses or capillary refilling time !3 seconds) in the absence of clinical dehydration. Sarmin defined sepsis as tachycardia plus hypothermia (35.0°C) or hyperthermia (38.5°C), or abnormal WBC count plus presumed presence of infection. Villegas defined sepsis as evidence of infection and presence of two or more of the following: hyperthermia or hypothermia, tachycardia, tachypnea, leukocytosis or leukopenia, neutrophilia, deviation to the left.

dThe number of sepsis patients included in the meta-analysis

eRisk of bias assess using the first four domains of the QUIP tool (insert reference).

fNiederwanger et al, 2018, *Annals of Intensive Care*.

gTonial et al, 2020, *Pediatric Intensive Care Medicine*.

hTonial et al, 2020, *Jornal de Pediatra*.

iThis paper reported separately on 438 medical ICU patients and 138 post-surgical ICU patients.

iAbbreviations: ACCP = American College of Chest Physicians; AKI = acute kidney injury; ALT = alanine transferase; aPTT = activated partial thromboplastin time; ATS = American Thoracic Society; BNP = brain natriuretic protein; BP = blood pressure; CRP = c-reactive protein; ESICM = European Society of Critical Care Medicine; GCS = Glasgow Coma Scale; INR = international normalized ratio; IPSCC = International Pediatric Sepsis Consensus Conference; LOC = level of consciousness; LVEF = left ventricular ejection fraction; MODS = multiorgan dysfunction syndrome; PELOD = pediatric logistic organ dysfunction; PIM = pediatric index of mortality; PRISM = pediatric risk of mortality; PT = prothrombin time; SAM = severe acute malnutrition; SCCM = Society of Critical Care Medicine; SIS = Surgical Infection Society; SOFA = sequential organ failure assessment; VIS = vasoactive inotropic score.